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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@fbtlaw.com

Office Action Summary

Application No.

10/596,095

Applicant(s)

DE RIJK, JAN

Examiner

Lucas Stelling

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-80 is/are pending in the application.
- 4a) Of the above claim(s) 46-77 and 80 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 23-45 and 79 is/are rejected.
- 7) ☒ Claim(s) 16-22 and 78 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12-07-06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of group I, claims 1-45, 78 and 79 in the reply filed on 6-8-10 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Accordingly, claims 46-77 and 80 are withdrawn as directed to the non-elected invention.

Claim Objections

2. Claims 16-22, and 78 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

3. Claim 29 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 15. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 11 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for certain bactericides, does not reasonably provide enablement for "any bactericide having a bactericidal potency and host spectrum substantially equivalent to hydrogen peroxide." The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Applicant includes specific compounds which were found effective as bactericides (See instant specification [00116]), but applicant does not provide direction on determining whether any bactericide having a bactericidal potency and host spectrum substantially equivalent to hydrogen peroxide. It would require undue experimentation on the part of a person having ordinary skill in the art to determine which bactericides have such a bactericidal potency and host spectrum. Therefore, applicant's disclosure does not provide enablement commensurate in scope with the claims.

6. Claim 12 rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for EDTA, does not reasonably provide enablement for any agent which enhances the dislodging of a biofilm. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Applicant provides that the biofilm dislodging agents can be a chaotropic agent or a calcium chelator such as EDTA, but applicant does not provide instruction on determining what other biofilm dislodging agents can be used. It would require undue experimentation on

the part of a person having ordinary skill in the art at the time of invention to determine which agents act to enhance the dislodging of a biofilm. Therefore, applicant disclosure does not provide enablement commensurate in scope with the claims.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 attempts to relate the concentration to an amount effective to treat biofilm in a water system. This is indefinite for failing to particularly describe the metes-and-bounds of the claim because it relates the concentration to thing which is variable, namely the amount which is effective to treat any given biofilm in any given water system. Moreover, claim 3 recites the limitation "the concentration" in line 1. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 provides a "Markush" group where the group of carbonates is defined, however "sodium sulfate" is included in lines 2 and 3. Sodium sulfate is not known to contain carbonate, and therefore it is unclear what the boundaries of the claim are.

10. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. It is not clear what constitutes "ammonium acid glyconate, sodium acid glyconate, lithium acid glyconate" or "potassium acid glyconate."

11. Claims 15, 24, 25-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether the composition includes 300 liters of water, or not. For purposes of examination it will be interpreted that 300 liters of water is not required, and that the weights refer to the relative amounts of the components of the composition.

12. Claims 30- 41 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 30-41 indicate that the relative concentrations of the constituent components in the composition, and claims that these concentrations are the concentrations in the final concentration in the water to be treated. It is unclear whether the composition includes water, or whether this is simply applicant's preferred mode of use.

13. Claim 79 recites the limitation "the step" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by JP2000-063894 to Toru as evidenced by "glyconic acid definition" from Dictionary.com ("glyconic acid definition").
16. As to claim 1, Toru teaches a composition comprising: a metasilicate, a carbonate, a glyconate; and a sulfate (**See abstract, sodium carbon, sodium gluconate, sodium metasilicate, and sodium sulfate are taught**). Note also that the term glyconate, which is the base anion of glyconic acid, is another name for gluconate, the base of gluconic acid (**See as evidence, the dictionary definition of glyconic acid, which is also known as gluconic acid, of which the salt is gluconate**). Note that the use of another reference in a 102 rejection is proper when used to show the meaning of a term in the prior art. In this case the extra reference is used to show that gluconate in the prior art is a glyconate. See MPEP 2131.01(II).
17. As to claim 2, further teaches that the composition contains sodium bicarbonate (**See abstract**).
18. As to claim 3, Toru teaches the composition of claim 1, and the use to treat a biofilm in a water system is applicant's intended use and does not particularly limit the concentration or amount of the compound. See MPEP 2114.
19. As to claim 4, Toru teaches that the metasilicate is sodium metasilicate (**See Toru abstract**).

20. As to claim 5, Toru teaches that the carbonate is sodium carbonate (**See Toru abstract**).
21. As to claim 6, Toru teaches sodium gluconate (**See Toru abstract**).
22. As to claim 7, Toru teaches that the sulfate is sodium sulfate (**See Toru abstract**).
23. As to claim 8, Toru as evidenced by the glyconic acid definition teaches the composition of claim 1, and Toru does not mention incorporating a peroxide, terpene or sodium hypochlorite into the composition (**See Toru throughout**).
24. Claims 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Toru as evidenced by the dictionary definition of glyconic acid and as further evidenced by "The Green Chelate, A green alternative to EDTA, NTA, Phosphonates and Phosphates." from www.akzonobel.com ("the green chelate").
25. As to claims 12 and 13, Toru teaches the composition of claim 1 and further teaches providing glutamic acid diacetic acid ("GLDA") and its salts in order to act as a builder for the removal of calcium and magnesium (**See Toru [0016] and see [0022]**). The green chelate explains that GLDA is a calcium chelator (**See the green chelate in the box "GLDA: soft on skin, GLDA is indicated as a calcium chelator"**). Note that the use of an extra reference is proper to show that a characteristic not disclosed in a reference is inherent. In this case the green chelate reference shows that GLDA is a calcium chelator. See MPEP 2131.01(III).

Claim Rejections - 35 USC § 103

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

27. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

28. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toru as evidenced by the dictionary definition of glyconic acid and in view of U.S. Patent No. 5,707,534 to Del Corral et al. ("Del Corral") .

29. As to claims 2 and 10, Toru as evidenced by the dictionary definition of glyconic acid teach the composition of claim 1, but Toru does not mention one or more salts such as sea salt. Del Corral is drawn to a composition used to treat water in which the composition is incorporated into a salt carrier matrix (**See Del Corral col. 7 lines 50 -- col. 8 lines 48**), which includes the use of sea salt (**See Del Corral col. 8 lines 34-35**). Del Corral explains that a salt carrier matrix is used to provide an inert carrier for the water treatment compositions (**See Del Corral col. 7 lines 50-60**), and is used along

with glyconate as a hardness reducer and metasilicate (**See Del Corral col. 8 lines 35-45, and see col. 11 lines 1-5**). Therefore, a person having ordinary skill in the art at the time of invention would have found it obvious to provide a salt, such as sea salt, in order to provide an inert carrier for the composition.

30. Claims 3, 8, 9, 11, 14 and 79 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toru as evidenced by the dictionary definition of glyconic acid and the green chelate reference in view of U.S. Patent Application Publication No. 2002/0016278 to Barbeau et al. ("Barbeau").

31. As to claim 3, Toru as evidenced by the dictionary definition of glyconic acid teaches the composition of claim 1, and although Toru contemplates microbial degradability on the dish surface after washing (**See Toru [0001]**), Toru does not contemplate that the composition is in a concentration effective to treat a biofilm in a water system. Barbeau teaches a composition comprising a detergent in which is used to clean biofilms (**See Barbeau abstract and throughout**). Barbeau is provided in a amount effective to remove the biofilm and thereby treat it in the water system (**See at least Barbeau e.g. [0056] -- [0081], various chemicals are contemplated in concentrations for the effective removal of biofilms, see abstract**). The composition in Toru relates to a detergent in order to remove hardness from the water thereby increasing the effectiveness of the detergent (**See Toru [0022]**). Therefore, a person having ordinary skill in the art at the time of invention would have found it obvious to provide the builder composition of Toru to the detergent composition Barbaeu in order

to remove hardness in the water, and thereby to facilitate the detergent cleaning effect. In doing so, it would have been obvious to a person having ordinary skill in the art at the time of invention to provide the composition in an amount to treat the biofilm in a water system, in order to remove the biofilm.

32. As to claim 8, Toru as evidenced by the glycoconic acid definition teaches the composition of claim 1, and although Toru does not mention including a composition of peroxide, terpene or sodium hypochlorite, their non-inclusion is not specifically mentioned. Barbeau teaches a composition comprising a detergent in which is used to clean biofilms (**See Barbeau abstract and throughout**). Barbeau teaches that it is desirous to exclude peroxide, sodium hypochlorite and terpene from the composition (**See Barbeau [0014] and [0015]**). The composition in Toru relates to a detergent in order to remove hardness from the water thereby increasing the effectiveness of the detergent (**See Toru [0022]**). Therefore, a person having ordinary skill in the art at the time of invention would have found it obvious to provide the builder composition of Toru to the detergent composition Barbaeu in order to remove hardness in the water, and thereby to facilitate the detergent cleaning effect. In doing so, the compositions of peroxide, terpene, and sodium hypochlorite are specifically discourage by Barbeau, and therefore it would have been obvious not to include them.

33. As to claim 9, Toru as evidenced by the dictionary definition of glycoconic acid teaches the composition of claim 1, but Toru does not mention the use of a bactericide. Barbeau teaches a composition comprising a detergent in which is used to clean biofilms (**See Barbeau abstract and throughout**). Barbeau further teaches using a

biocide in the detergent composition, which is used to provide bactericidal activity to the cleaning solution (**See Barbeau [0081]**). The composition in Toru relates to a detergent a detergent in order to remove hardness from the water thereby increasing the effectiveness of the detergent (**See Toru [0022]**). Therefore, a person having ordinary skill in the art at the time of invention would have found it obvious to provide the builder composition of Toru to the detergent composition Barbaeu in order to remove hardness in the water, and thereby to facilitate the detergent cleaning effect. In doing so, it would have been obvious to include a bactericide in order to provide bactericidal activity to the cleaning solution.

34. As to claim 11, Toru as evidenced by the dictionary definition of glyconic acid and in view of Barbeau teaches the invention of claim 9, and Barbeau further suggests using bactericides which have a bactericidal potency and host spectrum substantially equivalent to hydrogen peroxide (**See [0019] and claim 13**).

35. As to claim 14, Toru as evidenced by the dictionary definition of glyconic acid and the green chelate reference teach the composition of claim 12, but the use of chaotropic agent is not discussed. Barbeau teaches a composition comprising a detergent in which is used to clean biofilms (**See Barbeau abstract and throughout**). Barbeau further teaches using a chaotropic agent to increase the cleaning strength of the solution (**See Barbeau [0079]**). The composition in Toru relates to a detergent a detergent in order to remove hardness from the water thereby increasing the effectiveness of the detergent and enhance the ability to dislodge biofilm (**See Toru [0022] and [0019]**). Therefore, a person having ordinary skill in the art at the time of

invention would have found it obvious to provide the builder composition of Toru to the detergent composition Barbaeu in order to remove hardness in the water, and thereby to facilitate the detergent cleaning effect. In doing so, it would have been obvious to include a chaotropic agent in order to increase the effectiveness of the detergent and enhance the ability to dislodge biofilm.

36. As to claim 79, Toru as evidenced by the dictionary definition of glyconic acid teaches the composition of claim 1, but Toru is used as a dish detergent composition and a step of treating microorganisms with the composition is not contemplated.

Barbeau teaches treating biofilms comprising bacteria with a detergent composition in order to remove the biofilm and destroy the bacteria **(See Barbeau abstract)**.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of invention to provide a step of treating microorganisms in order to remove a biofilm and destroy the microorganisms.

37. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toru as evidenced by the dictionary definition of glyconic acid and in view of U.S. Patent No. 4,747,978 to Loehr et al ("Loehr").

38. As to claim 23, Toru as evidenced by the dictionary definition of glyconic teaches the composition of claim 4, and Toru contemplates sodium carbonate, sodium glyconate, but does not mention the use of potassium aluminum sulfate. Loehr is directed to a water treating composition **(See abstract)**. Loehr includes potassium aluminum sulfate in the composition because it is a flocculent which helps to

minimize turbidity and improve the clarity of the water (**See Loehr col. 2 line 47 -- col. 3 line 2**). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of invention to include potassium aluminum sulfate in order to provide a flocculent to reduce turbidity and improve clarity.

39. Claims 15, and 24-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toru as evidenced by the dictionary definition of glyconate in view of Loehr and Del Corral.

40. As to claim 15, 26, 27, 29, Toru as by the dictionary definition of glyconate teaches the composition of claim 1, and Toru provides metasilicate, sodium carbonate, sodium bicarbonate (an inorganic salt) sodium glyconate, but Toru does not teach the use of potassium aluminum sulfate. Nor does Toru teach the specific amounts of each of these compounds as claimed.

41. As to the use of potassium aluminum sulfate, Loehr is directed to a water treating composition (**See abstract**). Loehr includes potassium aluminum sulfate in the composition because it is a flocculent which helps to minimize turbidity and improve the clarity of the water (**See Loehr col. 2 line 47 -- col. 3 line 2**). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of invention to include potassium aluminum sulfate in order to provide a flocculent to reduce turbidity and improve clarity.

42. As to the amount of potassium aluminum sulfate, Loehr teaches that the amount of potassium aluminum sulfate is a result effective variable which controls the amount of solids which settle out (**See Loehr col. 3 lines 3-10**). *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980))*.

43. As to the amount of carbonate, sodium bicarbonate (a salt), and metasilicates are ingredients which decompose and solubilize dirt (**See Toru [0019]**). And therefore, their amounts are result effective variables which determine the cleaning effect of the ultimate detergent composition (**See also [0020]**). *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980))*.

44. As to the amount of glyconate, Toru teaches that gluconate causes a synergistic effect with the builder of the detergent composition (**See Toru [0032]**). Moreover, Del Corral explains that gluconate acts as a metal chelant, and sequesters iron in use (**See Del Corral col. 8 lines 40-48**). A chelant will have an effect in a stoichiometric ratio with respect metal being chelated. Therefore, a person having ordinary skill in the art at the time of invention would recognize that the amount of gluconate in the composition is a result effective variable which controls a synergistic effect with other builder chemicals in the compound as well as providing for metal chelation, such as iron. *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in*

the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980)).

45. As to claim 24, 25, and 28, Toru as evidenced by the dictionary definition of glyconic acid teaches the composition of claim 1, and Toru provides metasilicate, sodium carbonate, sodium glyconate, but Toru does not teach the use of an aluminum sulfate, such as potassium aluminum sulfate. Nor does Toru teach the specific amounts of each of these compounds as claimed.

46. As to the use of aluminum sulfate and potassium aluminum sulfate, Loehr is directed to a water treating composition (**See abstract**). Loehr includes aluminum sulfate or potassium aluminum sulfate in the composition because it is a flocculent which helps to minimize turbidity and improve the clarity of the water (**See Loehr col. 2 line 47 -- col. 3 line 2**). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of invention to include aluminum sulfate or potassium aluminum sulfate in order to provide a flocculent to reduce turbidity and improve clarity.

47. As to the amount of aluminum sulfate or potassium aluminum sulfate, Loehr teaches that the amount of aluminum sulfate or potassium aluminum sulfate is a result effective variable which controls the amount of solids which settle out (**See Loehr col. 3 lines 3-10**). *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980)).*

48. As to the amount of carbonate, and metasilicates are ingredients which decompose and solubilize dirt (**See Toru [0019]**). And therefore, their amounts are

result effective variables which determine the cleaning effect of the ultimate detergent composition (**See also [0020]**). *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980))*.

49. As to the amount of glyconate, Toru teaches that gluconate causes a synergistic effect with the builder of the detergent composition (**See Toru [0032]**). Moreover, Del Corral explains that gluconate acts as a metal chelant, and sequesters iron in use (**See Del Corral col. 8 lines 40-48**). A chelant will have an effect in a stoichiometric ratio with respect metal being chelated. Therefore, a person having ordinary skill in the art at the time of invention would recognize that the amount of gluconate in the composition is a result effective variable which controls a synergistic effect with other builder chemicals in the compound as well as providing for metal chelation, such as iron. *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980))*.

50. As to claims 30, 32, 34, 36, 38, and 40, Toru as evidenced by the dictionary definition of glyconic acid teaches the composition of claim 1, which includes metasilicate, sodium carbonate, and sodium gluconate. But Toru does not teach the specific amounts of each of these compositions as claimed. Also Toru does include sodium sulfate, but the specific amount of this composition as claimed is not taught and sodium sulfate is taught simply as an extender (**See Toru [0025]**), so the amount of sodium sulfate does not appear to be particularly critical in Toru.

51. As to the use of sulfate, Loehr is directed to a water treating composition (**See abstract**). Loehr includes aluminum sulfate or potassium aluminum sulfate in the composition because it is a flocculent which helps to minimize turbidity and improve the clarity of the water (**See Loehr col. 2 line 47 -- col. 3 line 2**). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of invention to include aluminum sulfate or potassium aluminum sulfate in order to provide a flocculent to reduce turbidity and improve clarity.

52. As to the amount of aluminum or potassium aluminum sulfate, Loehr teaches that the amount of aluminum sulfate or potassium aluminum sulfate is a result effective variable which controls the amount of solids which settle out (**See Loehr col. 3 lines 3-10**). *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980)).*

As to the amount of carbonate, and metasilicates are ingredients which decompose and solubilize dirt (**See Toru [0019]**). And therefore, their amounts are result effective variables which determine the cleaning effect of the ultimate detergent composition (**See also [0020]**). *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980)).*

53. As to the amount of glyconate, Toru teaches that gluconate causes a synergistic effect with the builder of the detergent composition (**See Toru [0032]**). Moreover, Del Corral explains that gluconate acts as a metal chelant, and sequesters iron in use (**See**

Del Corral col. 8 lines 40-48). A chelant will have an effect in a stoichiometric ratio with respect metal being chelated. Therefore, a person having ordinary skill in the art at the time of invention would recognize that the amount of gluconate in the composition is a result effective variable which controls a synergistic effect with other builder chemicals in the compound as well as providing for metal chelation, such as iron. *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980)).*

As to claims 31, 33, 35, 37, 39 and 41, Toru as evidenced by the glyconic acid definition and Del Corral teach the compositions of claims 30, 32, 34, 36, 38 and 40, and Toru further teaches the use of sodium bicarbonate, which is a salt of carbonic acid, Toru explains that sodium bicarbonate is an ingredient which decomposes and solubilizes dirt (**See Toru [0019]**). Its amount is a result effective variable which determines the cleaning effect of the ultimate detergent composition (**See also [0020]**). *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980)).*

54. As to claims 42, 43, and 44, Toru teaches a composition containing metasilicate, sodium carbonate, sodium gluconate, and sodium bicarbonate (an inorganic salt) (**See Toru abstract**). Toru also teaches that the composition relates to a detergent composition and that the composition is diluted in water in use (**See e.g. [0037] and [0041]**). But, Toru does not mention the use of potassium aluminum sulfate. Nor does

Toru does not teach the specific concentrations of each of these compositions as claimed.

55. As to the use of potassium aluminum sulfate, Loehr is directed to a water treating composition (**See abstract**). Loehr includes potassium aluminum sulfate in the composition because it is a flocculent which helps to minimize turbidity and improve the clarity of the water (**See Loehr col. 2 line 47 -- col. 3 line 2**). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of invention to include potassium aluminum sulfate in order to provide a flocculent to reduce turbidity and improve clarity.

56. As to the amount of potassium aluminum sulfate, Loehr teaches that the amount of potassium aluminum sulfate is a result effective variable which controls the amount of solids which settle out (**See Loehr col. 3 lines 3-10**). *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980))*.

57. As to the amount of carbonate, sodium bicarbonate (a salt), and metasilicates are ingredients which decompose and solubilize dirt (**See Toru [0019]**). And therefore, their amounts are result effective variables which determine the cleaning effect of the ultimate detergent composition (**See also [0020]**). *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980))*.

58. As to the amount of glyconate, Toru teaches that gluconate causes a synergistic effect with the builder of the detergent composition (**See Toru [0032]**). Moreover, Del Corral explains that gluconate acts as a metal chelant, and sequesters iron in use (**See Del Corral col. 8 lines 40-48**). A chelant will have an effect in a stoichiometric ratio with respect metal being chelated. Therefore, a person having ordinary skill in the art at the time of invention would recognize that the amount of gluconate in the composition is a result effective variable which controls a synergistic effect with other builder chemicals in the compound as well as providing for metal chelation, such as iron. *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980))*.

59. As to claim 45, Toru as evidenced by the dictionary definition of glyconic acid teaches a composition comprising metasilicate, sodium carbonate and sodium gluconate. Toru also teaches that the composition relates to a detergent composition and that the composition is diluted in water in use (**See e.g. [0037] and [0041]**). But Toru does not teach using sea salt, potassium aluminum sulfate, or fragrances. Nor does Toru does not teach the specific concentrations of each of these compositions as claimed.

60. Del Corral is drawn to a composition used to treat water in which the composition is incorporated into a salt carrier matrix (**See Del Corral col. 7 lines 50 -- col. 8 lines 48**), which includes the use of sea salt (**See Del Corral col. 8 lines 34-35**). Del Corral explains that a salt carrier matrix is used to provide an inert carrier for the water

treatment compositions (**See Del Corral col. 7 lines 50-60**), and is used along with glyconate, which is a hardness reducer, and metasilicate (**See Del Corral col. 8 lines 35-45, and see col. 11 lines 1-5**). Therefore, a person having ordinary skill in the art at the time of invention would have found it obvious to provide a salt, such as sea salt, in order to provide an inert carrier for the composition. As to the amount of sea salt, Del Corral explains that the salt carrier should be provided in an amount such that a stable tablet is produced, in light of temperature and humidity in a given situation (**See Del Corral col. 2 line 65 -- col. 3 line 35**). Therefore, the salt content of a tablet is a result effective variable which controls the stability of the tablet in view of the temperature and humidity. *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980))*. And, the salt content of the tablet relates directly to the salt concentration once dissolved.

61. As to the use of potassium aluminum sulfate, Loehr is directed to a water treating composition (**See abstract**). Loehr includes potassium aluminum sulfate in the composition because it is a flocculent which helps to minimize turbidity and improve the clarity of the water (**See Loehr col. 2 line 47 -- col. 3 line 2**). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of invention to include potassium aluminum sulfate in order to provide a flocculent to reduce turbidity and improve clarity.

62. As to the amount of potassium aluminum sulfate, Loehr teaches that the amount of potassium aluminum sulfate is a result effective variable which controls the amount of

solids which settle out (**See Loehr col. 3 lines 3-10**). *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980))*.

63. As to the use of fragrances, Del Corral explains that perfume and fragrances are commonly used in the art to provide an acceptable odor to the system in which the composition is used (**See Del Corral col. 12 lines 20-30**). Therefore, it would have been obvious to a person having ordinary skill in the art at the time of invention to provide a fragrance to the tablet in order to produce an acceptable odor in the system of use. The amount of fragrance used is based on the amount needed to produce the desired odor and is therefore a result effective variable. *Discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980))*.

64. As to the amount of carbonate, and metasilicates are ingredients which decompose and solubilize dirt (**See Toru [0019]**). And therefore, their amounts are result effective variables which determine the cleaning effect of the ultimate detergent composition (**See also [0020]**). *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980))*.

65. As to the amount of glyconate, Toru teaches that gluconate causes a synergistic effect with the builder of the detergent composition (**See Toru [0032]**). Moreover, Del

Corral explains that gluconate acts as a metal chelant, and sequesters iron in use (**See Del Corral col. 8 lines 40-48**). A chelant will have an effect in a stoichiometric ratio with respect metal being chelated. Therefore, a person having ordinary skill in the art at the time of invention would recognize that the amount of gluconate in the composition is a result effective variable which controls a synergistic effect with other builder chemicals in the compound as well as providing for metal chelation, such as iron. *Discovery of optimum value of result effective variable in known process is ordinarily within the skill in the art and would have been obvious, consult In re Boesch and Slaney (205 USPQ 215 (CCPA 1980))*.

66.

Request for Information

It is noted that certain portions of applicant's specification share a very close resemblance to passages found in certain prior art documents (**C.f. instant specification [0094] -- [0099] and Del Corral col. 7 lines 50 -- col. 8 lines 47; and c.f. instant specification [0109] -- [00116] and Barbeau [0077]--[0082]**). Applicant is reminded of their Rule 56 duty to disclose information material to patentability. See MPEP 2001.04 and 2001.05. See also MPEP 2004(10), *when in doubt, it is desirable and safest to submit information. Even though the attorney, agent, or applicant doesn't consider it necessarily material, someone else may see it differently and embarrassing questions can be avoided (citations omitted)*. The examiner requests applicant submit references which were used and by applicant or applicant's attorney in the drafting of

the instant patent application. See 37 CFR 1.105(a)(1)(iv), and see MPEP 704.10.

Submission may be made by way of an IDS. See MPEP 609 et seq.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucas Stelling whose telephone number is (571)270-3725. The examiner can normally be reached on Monday through Thursday 12:00PM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.